

Selecting for Medical Education

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Admission to medical school is effectively admission to the medical profession because drop out rates during basic medical education are extremely low.¹ Choosing the right people to be tomorrow's doctors is, therefore, important not only for the applicants and medical schools but also for future patients and society. Selection decisions are very difficult, with the ratio of academically qualified applicants to medical school places typically around 2 - 3 : 1,² and becoming more difficult because over time more applicants are meeting the academic threshold that is usually the first hurdle.³

It is very likely that medicine will continue to be a popular career choice over the next 50 years. It will continue to be a rewarding career offering intellectual stimulation, a respected role in society, a relatively good income and job security – illness will always be part of the human condition. In the future, society will expect complete transparency in how selection for medical school is made. It is likely that there will be a continuing drive towards equity of access by ensuring that more students from less privileged backgrounds or minority ethnic groups are admitted to better reflect the society they will serve. There is also likely to be more pressure from governments to select applicants who will want to enter less popular specialities such as primary care and psychiatry and work in underserved areas, such as remote and rural parts of the world. To meet these agendas, medical schools will have to be very good at selecting the right students.

The carefully conducted and very thoughtful systematic review published in this special edition of the Journal clearly describes the current evidence base for selection methods and articulates its deficiencies.⁴ These include: many cross –sectional studies with few using more robust research designs; use of reliability to assess quality at the expense of validity; little research on construct validity; lack of relative cost-effectiveness data; and relatively little longitudinal evidence. In addition, although most medical schools use multiple selection methods to make decisions, few studies examine whole selection systems, focusing instead

on single methods. Is, for example, a combination of academic record, an aptitude test and a structured interview superior to academic record alone in making valid and reliable selection judgements?

The systematic review identified eight methods currently used in medical school selection and evaluated these methods against four criteria: effectiveness (validity and reliability); procedural issues (broadly about how a method is applied in practice and how this affects its utility); acceptability (to applicants, medical schools and other stakeholders); and cost-effectiveness. In summary, this systematic review suggests that academic records are commonly used in most medical schools and there is strong evidence of predictive validity for continuing to use them. Structured Interviews, Multiple Mini Interviews, Situational Judgements Test and Selection Centres (mainly used for postgraduate selection) are more effective and fairer than traditional interviews, references and personal statements. There is mixed evidence about the effectiveness and fairness of aptitude tests depending on which test is studied.

Let me sound a note of caution about academic attainment. I would not argue against using this as a method of selection but care should be taken when pushing the threshold level up too high. Demonstrating ability to do well at school, medical school and in postgraduate exams does not necessarily ensure that the individual will be a good doctor. All of us, who have worked in medical schools, have known students who have performed very well academically but have been unable to meet expectations in the workplace in terms of professional behaviour. This issue is related to questions about validity. What are the appropriate outcomes i.e. what kind of doctors are we trying to produce, how do we measure if we have achieved these outcomes and can we use selection methods that will predict the outcomes we want? The authors correctly urge the development of a comprehensive framework of outcome criteria.

The aim of medical education must be to produce “good doctors” but how is this defined and measured? *Good medical practice* defines the duties of a doctor registered with the General Medical Council (GMC) in the United Kingdom and addresses standards of knowledge, skills and performance, safety and quality, communication, partnership and teamwork, and maintaining trust.⁵ Revalidation is used to assess if doctors meet these standards but this is a blunt instrument and only a small minority of doctors fail to become revalidated.⁶ There is currently no grading attached to the process, simply a pass or fail. Therefore, although the domains in Good Medical Practice seem to cover most of the important attributes we would wish to see in a good doctor, this process couldn’t currently be used as part of an outcomes framework to guide medical schools in choosing the best methods for making selection decisions. Within the revalidation framework, however, there are quantitative measures that could be used if the ethical and confidentiality obstacles could be overcome. These elements include peer feedback and patient feedback using validated instruments.

It is likely that an appropriate outcome framework will include a composite of many different individual outcomes that may include: academic performance in medical school and postgraduate examinations; performance at revalidation; patient feedback; peer feedback; measures of esteem within the profession; duration and place of service; complaints and disciplinary procedures; and other outcomes as yet undetermined.

The authors of the systematic review propose a research agenda that includes focusing on the long-term follow-up of medical students, exploring widening access and diversity issues, and developing theoretically driven studies of construct validity, so that we can fully understand what is being assessed in the selection process. They also demand that future research must consider selection methods within a wider selection system. I entirely agree with this agenda but, in addition, I would suggest that first of all we need to be very clear about what kind of doctors we are trying to produce and how the optimum attributes can be translated into

measurable outcomes. I think there is scope to develop and test new selection methods as well as researching current methods. Studies need to be decades long and multi-site or country wide to ensure sufficient numbers to make robust estimates and they need to compare the selection systems used, correcting for confounding where possible. Finally, as for any assessment method, cost-effectiveness measures need to be included. Just over ten years ago, I argued in this Journal that “a mixture of measures covering a broad range of attributes is likely to provide the best way of selecting our future doctors”.⁷ We now need to grasp the research agenda and develop ways of researching which combination of measures is most predictive of selecting good doctors.

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